

## A complete SAR data simulation system

**GSS suite** is an end-to-end SAR raw data simulation system.

GSS allows to generate and to work with realistic SAR data before the real SAR system is in operations.

**GSS suite** is composed by four main components:

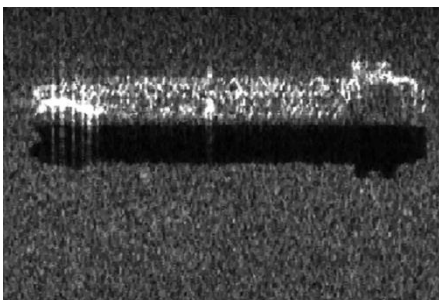
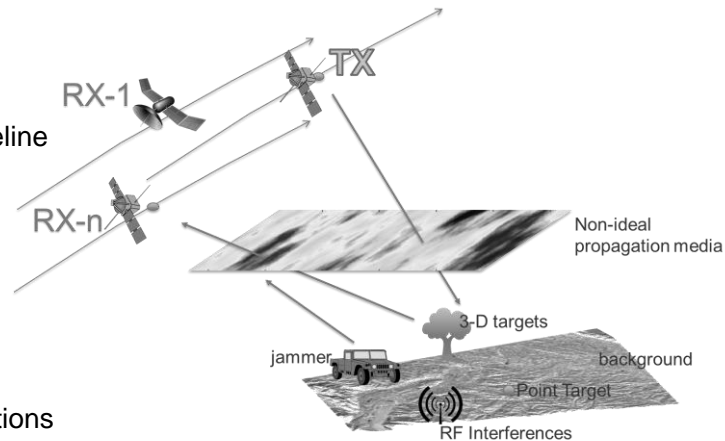
- **GSS engine:** the core simulation software, modelling the SAR data acquisition
- **GSS-distributed:** the extension for distributed scenes simulation, with interferometric capability
- **GSS-3D:** the module dedicated to model complex targets such as ships, planes
- **GSS-RT:** the real-time signal generator to generate analogic signals from the simulated data.

## Who are the typical users of the GSS suite?

- SAR system designers
- SAR processing specialists
- SAR mission designers

## GSS suite main Features

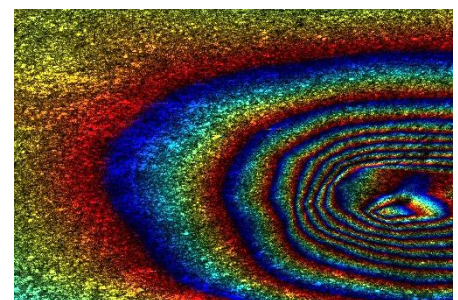
- ✓ Fully configurable acquisition geometry and timeline
- ✓ Multi-sensor simulation
- ✓ Realistic trajectory includes arbitrary flight path
- ✓ Radar parameters and antenna pulse-by-pulse
- ✓ Radar electronic chain modeling
- ✓ Realistic ground scene modeling
- ✓ Configurable targets motion
- ✓ Multi-process and multi-thread allow fast simulations
- ✓ Easy configuration through GUI
- ✓ Analogic raw data signal and NAVI signals played with accurate timing.



(a) 3D targets



(b) Extended scenes



(c) Interferometric simulations